

REMARKS

Claims 1 through 15 are currently pending in the application and stand rejected.

Claims 1, 3, and 5 through 15 have been amended.

Applicants note the filing of an Information Disclosure Statement herein on September 19, 2002, and note that no copy of the PTO-1449 was returned with the outstanding Office Action. Applicant respectfully requests that the information cited on the PTO-1449 be made of record herein.

Claim 7 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 1 through 9 and 11 through 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kinoshita, Japanese Patent No. 58-90728 (hereinafter "Kinoshita").

Claims 8 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Deguchi, Japanese Patent No. 62-18714 (hereinafter "Deguchi").

Reconsideration of the above-referenced application is respectfully requested.

**35 U.S.C. § 112 Rejection**

Claim 7 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully submit that presently amended claimed 7 now particularly points out and distinctly claims the subject matter of the invention to comply with the provisions of 35 U.S.C. § 112. Therefore, Applicants respectfully request that the rejection under the provisions of 35 U.S.C. § 112 be withdrawn and the claim passed to issuance.

### **35 U.S.C. § 102(b) Anticipation Rejections**

#### **(A) Applicable Authority**

Applicants submit that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

#### **(B) Anticipation Rejections of Claims 1 through 9 and 11 through 15**

Claims 1 through 9 and 11 through 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kinoshita.

Kinoshita describes a method for manufacturing a positioning mark on a semiconductor wafer. First, a mask layer is formed on a semiconductor wafer. Next, a filter resist layer is formed on the mask layer. The photoresist layer is then etched to form a plurality of fine windows. Finally, the portions of the exposed mask layer are etched to form a plurality of fine depressions having an arc-shaped cross-sectional form that are arranged on the main surface of the semiconductor wafer (Kinoshita, claim 2, first paragraph of the detailed description). Kinoshita defines such an arc-shaped form as “an arc-shaped cross-section of a circle having a diameter having about 1-5 micrometers” (*Id.*, paragraph 12 of the detail description of the invention).

Applicants respectfully submit that Kinoshita does not anticipate the instant invention under 35 U.S.C. § 102 in presently amended independent claims 1, 5, and 8 because each and every element as set forth therein is not found, either expressly or inherently described in Kinoshita. In particular, Kinoshita does not expressly or inherently describe, the elements of the presently claimed invention calling for overlay targets with a series of raised lines. Presently amended independent claims 1, 5, and 8 recite, among other elements of the claimed invention, overlay targets including a series of substantially vertically extending laterally continuous raised lines. Kinoshita does not expressly or inherently describe, such a series of substantially vertically extending laterally continuous raised lines. Clearly, the pattern in the resist layer and the pattern

that includes a plurality of fine depressions having an arc-shaped cross-sectional form having a given diameter in the areas without resist etched into the surface of the semiconductor wafer are completely different than the substantially vertically extending laterally continuous raised lines of the instant invention. Thus, Kinoshita does not anticipate presently amended independent claims 1, 5, and 8 under 35 U.S.C. § 102.

In response to the arguments submitted by Applicants on June 20, 2002, the Office states that “the fact that Kinoshita shows fine indentations having an arc-shaped cross-sectional area does not oppose the fact that he also shows a trench including a series of substantially vertically extending raised lines originating at the bottom surface of the trench. See, for example, figure 2, where Kinoshita clearly shows a series of upright raised lines that extend vertically from the bottom of a trench 4” (Final Office Action, page 6, lines 1-6). Applicants respectfully submit that it is not possible for an arc-shaped cross-sectional area having a given diameter as taught and disclosed by Kinoshita to have substantially vertically extending raised lines because the line formed by a circle constantly changes direction locally and thus cannot be substantially vertical. Therefore, Kinoshita cannot support a finding of anticipation under 35 U.S.C. § 102 of presently amended independent claims 1, 5, and 8. Furthermore, claims 2 through 4, 6 and 7, and 9 through 15 are allowable, among other reasons, as depending directly or indirectly from claims 1, 5, and 8, respectively, which are allowable.

For each of the foregoing reasons, it is respectfully requested that the anticipation rejections of claims 1 through 9 and 11 through 15 under 35 U.S.C. § 102(b) be withdrawn and the claims allowed.

#### **(C) Anticipation Rejections of Claims 8 and 10**

Claims 8 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Deguchi.

Deguchi relates to a method for forming alignment marks in semiconductors using dry etching methods to form finely localized roughened areas, said marks having a part with high light reflectance and another part having low light reflectance, wherein positioning control of the substrate on which these parts are formed is performed by detecting the reflected light from both

of these parts (Deguchi, claims, page 2). More specifically, fine square conical projections as shown in FIG. 1 are formed by use of dry etching by high-frequency glow discharge using  $\text{CCl}_2\text{F}_2$  gas (*Id.*, lines 9-11, page 4) or numerous fine rod-shaped crystal protrudes are formed as shown in FIG. 2 by use of dry etching by high-frequency glow discharge using a mixed gas of  $\text{CF}_4$  and  $\text{O}_2$  (*Id.*, lines 28-31, page 4).

Applicants respectfully submit that Deguchi does not anticipate the instant invention recited in independent claim 8 because each and every element as set forth therein is not found, either expressly or inherently described in Deguchi. In particular, Deguchi does not describe overlay targets with a series of substantially vertically extending laterally continuous raised lines. Rather, as summarized hereinabove, Deguchi only teaches and discloses alignment marks or dry-etched localized roughened areas characterized by either fine square conical projections or numerous fine rod-shaped crystal protrudes, depending on the dry etching manufacturing technique used. Thus, Deguchi does not anticipate presently amended independent claim 8 under 35 U.S.C. § 102.

Further, claim 10 is allowable, among other reasons, as depending either directly or indirectly from claim 8, which is allowable.

Therefore, Applicants respectfully request that the anticipation rejection under 35 U.S.C. § 102(b) of claims 8 and 10 be withdrawn and the claims allowed.

### ENTRY OF AMENDMENTS

Applicants request entry of these amendments for the following reasons: (i) the amendments are timely filed; (ii) the amendments clearly place the application in condition for allowance; (iii) the amendments to claims should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings, do not add any new matter to the application, and clearly comply with the provisions of 35 U.S.C. § 132; and further, (iv) the amendments do not raise new issues or require further search.

### CONCLUSION

Applicants submit that claims 1 through 15 are clearly allowable over the cited prior art and respectfully request the allowance thereof and the case passed for issue.

Respectfully submitted,



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Date: January 3, 2003  
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Enclosure: Version with Markings to Show Changes Made

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